

## **POVERTY IN PAKISTAN**

**Nuzhat AHMAD**

This paper is a study of poverty in Pakistan and focuses on some of the relevant issues on the subject. It reviews the empirical literature on poverty in Pakistan over 50 years. It also estimates the extent of poverty in the country through data made available by Household Income and Expenditure Survey (HIES), Pakistan Integrated Household Survey (PIHS) upto 1995-96. However, it is not an attempt to improve on the methodology used for calculating poverty lines. Standard indices, the head count measure, poverty gap and the FGT index are calculated to observe the incidence of poverty. The paper calculates and compares Human Development Index, Human Poverty Index and Gender Equity Index, over the years. The study analyses the determinants and causes of poverty through a logit model based on available data.<sup>1</sup>

### **I. Introduction**

Much has been written on the subject of poverty over the last 50 years in Pakistan but increasing attention has been devoted to the subject in the more recent past. Definition of poverty and measurements of poverty line received the most attention in the early years. Sensitivity of poverty indices to the choice of poverty line has been highlighted in almost all studies. Rural-urban differences and provincial variations in both poverty line estimates and more elaborate attention to the extent and incidence of poverty was given as availability of data improved in the 1970's and 80's. Estimates of the extent of poverty in recent years are alarming. They show that poverty has been on the increase in Pakistan in the late Nineties.

Awareness of the problem has increased recently with an urgency of the need to tackle and alleviate poverty with innovative measures. Increased attention has been devoted, at the highest levels, to the subject of alleviation/eradication of poverty. In May 1997 a high powered task force on eradication of poverty was constituted with the mandate for making recommendations for overcoming poverty in the country.

<sup>1</sup> The paper was presented at the AERC Conference, 1998.

The paper is a study of poverty in Pakistan and focuses on some of the relevant issues on the subject. Well known indices of poverty e.g., the headcount ratio, poverty gaps, PGT indices are used to calculate the incidence of poverty. The paper is organised in the following way. The next section gives a very brief review of literature on methodology and data related issues and on determinants of poverty. Section III provides a historical perspective on poverty while Section IV analyses the determinants of poverty. Finally Section V summarises the results and outlines the policy implications.

## **II. Review of Literature**

This section on the review of literature is limited to studies undertaken for Pakistan. Some of the methodological and data related issues and studies on the determinants are discussed in detail. The other literature is covered in the Historical Perspective on Poverty in Section III.

### ***1) Measurement of Poverty and Data Sources***

Almost all the literature on poverty in Pakistan touches upon the issue of measurement of poverty. One conclusion that can be drawn from these studies is that the estimates of poverty are very sensitive to the measures of poverty lines. Some of these issues and those relating to data constraints and availability are discussed in this section on review of literature.

Most earlier studies on poverty in Pakistan simply estimated the headcount ratios i.e. the proportion of the poor in the population for single years based on the available HIES data. These studies were limited by the grouping of published data from these surveys and by the selection of arbitrary poverty lines. The resulting estimates were very sensitive to the choice of the poverty line, [Naseem (1973), and Allauddin (1975)].

By the mid 1970s and 1980s the focus shifted to estimating the extent of poverty and trends in poverty based on absorption of minimum diet for meeting nutritional requirements. Naseem (1977) defined the poverty line in constant 1959-60 prices of a consumption basket yielding 2100 calories and constructed poverty lines permitting the intake of 95 per cent, 92 per cent and 90 per cent of minimum required calories. Irfan and Amjad (1984) estimated rural poverty by using a poverty line that assumed a required intake of 2552 calories per day per adult equivalent, as suggested by the Nutrition Cell of the Planning Division and actual observations. They used the Micronutrient Survey of 1976-77 information to determine an income based poverty line of 109 rupees per capita per month in 1979 prices. HIES 1979 data was then used to obtain head count measures of poverty which estimated the number of persons/households below a determined poverty line.

The large number of estimates available show a sensitivity to the choice of poverty line. Ahmad and Ludlow (1989) presented measures of head count ratio for four different poverty lines based on total per capita expenditure per month, low (Rs80), medium (Rs90) medium-high (Rs100) and high (Rs110). The rural poverty lines were computed from HIES 1979 and 1984-85. The urban poverty line was assumed to be 10 rupees higher than the corresponding rural line. The authors however presented no standard errors for their poverty lines.

Ercelawn (1990) used the 1984-85 HIES to analyse the incidence and intensity of poverty in Pakistan. His basic concept was undernourishment and he estimated calorie expenditure functions by provinces, rural areas, towns and cities. He took the poverty line as the monthly expenditure per adult equivalent that a household needs to achieve a daily intake of 2550 calories per adult equivalent. The author then developed location specific and province specific poverty lines for 1984-85.

Based on Ercelawn's work Malik (1992) computed poverty lines through a calorie expenditure function of the form:

$$C = a + b \log E$$

where C is the calorie intake per adult equivalent and E is the monthly consumption expenditure per adult equivalent. Malik's work used only Ercelawn's rural poverty lines for both urban and rural areas as he found urban poverty lines to be rather high. To update 1984-85 poverty lines to 1987-88 ones the study used regional price indices which allowed for variations among provincial prices faced by the poor by computing a price index as follows:

$$F_{87-88} = \sqrt{\frac{\sum_i P_i^{87} * Q_i^{84}}{\sum_i P_i^{84} * Q_i^{84}} * \frac{\sum_i P_i^{87} * Q_i^{87}}{\sum_i P_i^{84} * Q_i^{84}}} \times 100$$

The quantity weights were taken from HIES 1984-85 and 1987-88 and reflected the consumption of lowest expenditure groups.<sup>2</sup>

More recent work Ahmad (1993) Jafri and Khattak (1995) used the basic needs approach to estimate poverty lines. This approach refers to the position of the individual or a household in relation to the minimum cost of a set of basic needs and food consistent with the spending patterns of the poor. (For a more detailed reference to the basic needs approach, see Appendix A on Methodology).

<sup>2</sup> Average price information used was from the Pakistan Statistical Yearbook.

## ***2) Determinants of Poverty***

Shirazi (1995) explored the impact and role of Sadaquat (spending in the path of Allah) on poverty status of the household. The main results of the paper indicated that Sadaquat had a negative relationship with poverty, education level of the household decreased the probability of being poor, people in Punjab had the highest probability of being poor as compared to the other provinces, probability of a household being poor declined with the number of earners and increased with the size of the household.

Zaidi (1992) analysed relative poverty in the country. His results showed that households whose heads were classified as agriculture, animal husbandry and forest workers were the poorest. The highest rate of poverty in this group was found in Baluchistan (54 per cent) and in Punjab (47 per cent). Production workers, transport operators and labourers were relatively more poor in all provinces except in Sindh. The large households whose heads had at least attained primary or lower education levels were in the high poverty groups across all provinces of Pakistan.

Malik's (1988) research analysed correlates of poverty and indicated that education and skill levels were extremely important in reducing the probability of poverty. Life cycle events and high dependency ratios were also found to be important correlates of poverty.

Zaidi and Vos (1993) and (1994) wrote on consequences of using three different equivalence scales and concluded that the size of the threshold was crucial in determining the size of the poor population. Their results indicated that poverty was relatively widespread for households headed by workers in transport and construction and in the agriculture sector. Households headed by workers in agriculture and in transport and construction represented 60 per cent of the poor population in the country. Large households living in rural areas and households with heads with less than primary education were more likely to be poor. Self-employed households had the highest poverty rates. The number of earners showed no significant effect on poverty rates, in fact poverty was reported to increase with the number of earners as shown by data in 1985-85 and 1987-88. Age of the head also showed no significant change in poverty and poverty remained widespread among all age groups.

Ahmad and Allison (1990) demonstrated that education and skill levels were extremely important in reducing the probability of poverty. Life cycle events and a high dependency ratio were shown to be important correlates of poverty in Pakistan.

## **III. A Historical Perspective on Poverty**

A brief historical perspective on poverty is provided in this section of the paper. A large number of studies estimating poverty using different methodologies and

sometime presenting contrary results make comparisons and generalisations difficult. These estimates of poverty were often shown to be sensitive to the methodology adopted and to the choice of the poverty line used. Most of the earlier research was based on grouped data available from the Household Income and Expenditure Surveys (HIES). A comparison and evaluation of the results is therefore a difficult task. This historical review of poverty is therefore limited to overall estimates of poverty, area of residence i.e. rural urban differences and regional differences across provinces. The historical review is divided into the Early Years, The Seventies and The Mid-Eighties, The Mid-Eighties and the Early Nineties. The Section ends with our estimates of poverty from the data from HIES, PHIS of 1992-93, 1993-94 and 1995-96.<sup>3</sup>

### *1) The Early Years*

Few studies analysed poverty in Pakistan for the early period of the 1950s and 1960s. The available literature indicated a mixed trend in poverty. Naseem (1973) and Allauddin (1975) showed a decline in the percentage of population below poverty line both for urban and rural areas in this early period. The most well known study analysing and reflecting the results for the period was that by Naseem (1977) which indicated that absolute number of people living below the poverty line in Pakistan was very high. He estimated that in the period 1963-70 around 54 per cent of the households were found to be below the poverty line when the norm of 92 per cent of the recommended calorie intake was used. If a more liberal definition of poverty was used then the proportion of the poor in total population remained the same but their number increased. Irfan and Amjad (1984) using published grouped HIES data concluded that the percentage of the very poor increased from slightly over 32 per cent in the year 1963-64 to over 43 per cent in 1969-70. The evidence on overall poverty in the country is mixed.

Naseem's figures vividly conveyed the extent of poverty in the rural areas with 25-30 per cent of the people in the 1960s living in abject poverty and 25 to 30 per cent living with slightly higher incomes but not above the subsistence level. The study showed that over the years the percentage of the rural poor declined from 43 per cent in 1963-64 to 26 per cent in 1969-70. The decline in the number of rural poor during this period was mainly due to the increased availability and production of foodgrains in the later part of the decade. Malik (1988) using published grouped data from HIES showed that rural poverty increased during the Sixties, in 1963-64 very poor households were 37 per cent which increased to 43 per cent in 1966-67, and to 44 per cent in 1969-70.

<sup>3</sup> This division in the following periods is for convenience and easy management only and has no relation to the political regimes at the time.

Naseem's results for urban poverty were close to that for rural poverty. He pointed out that the number of poverty stricken people was very sensitive to the choice of poverty line which was due to the concentration of the majority of people in a narrow range of per capita expenditure well below the average. The percentage of people living below the poverty line in urban areas was around 55 per cent in 1963-64 which reduced to 25 per cent in 1969-70. However, if the poverty line was raised then the extent of poverty became staggering with as much as 70 per cent of the urban population categorised as being poor in 1963-64.

In the early years there was concentration on the process of economic development in the country and little attention was paid to reducing poverty or inequality in the country. It was generally believed that poverty would be reduced through growth. However as seen from the evidence the fruits of this growth were not evenly distributed and in this period, proportion of people with sustainable expenditure levels was not affected.

## ***2) Poverty in the Seventies and Mid-Eighties***

As opposed to the Sixties there seems to be a consensus that poverty declined in the country during the Seventies right upto the middle of 1980s, [Kruijk and van Leeuwen (1985), Malik (1988), Ahmad and Ludlow (1989), and Ercelawn (1990)]. Jafri and Khattak's (1995) headcount ratios indicated that 36 per cent of the population during 1985-86 remained below the poverty line.

Kruijk and van Leeuwen (1985) and Kruijk (1987) using the HIES for 1969-70 and 1979 showed that there was significant decline in rural poverty. According to Malik (1988) poverty declined in the Seventies with the percentage of the very poor declining to 29 per cent in 1979 from 44 per cent in 1969-70. Irfan and Amjad (1983) argued that the decline in rural poverty at the end of the Seventies was because of the changes that took place outside the farm sector, mainly inflow of remittances to the rural areas.

Malik (1988) and (1992) stated that poverty levels in urban areas were found to be lower than in rural areas. Poverty in the urban areas declined, the number of very poor households in urban areas was 41 per cent percent in 1963-64 which declined to 19 per cent in 1984-85 and the number of poor households was 49 per cent in 1963-64 which reduced to 26 per cent in 1984-85. Higher growth rates in construction and services sector, inflow of remittances from abroad and a rise in wage levels due to migration all contributed to a decline in poverty in the urban areas. The introduction of distribution of Zakat in the 1980s may have had its favourable impact on poverty levels.

Provincial comparisons showed that in Punjab 43 per cent, in Sindh 30 per cent in NWFP 35 per cent and in Baluchistan 45 per cent of the households had expen-

ditures below the poverty line, [Zaidi (1992)]. Poverty rate for households living in rural areas was almost double the poverty rate in urban areas and 30 per cent higher for those living in rural Sindh than in urban Sindh. 41 per cent of all persons living in rural areas and 22 per cent in urban areas were poor. According to Zaidi and Vos (1994) the highest poverty rate of 40 per cent was found for Baluchistan in 1984-85 and the lowest poverty rate of 22 per cent in 1987-88. In NWFP they found a significant increase in poverty while in Punjab average poverty rates were found to be the same both in 1984-85 and 1987-88. One striking result observed for Sindh was that poverty rates increased for households living in rural Sindh and declined for households in urban Sindh.

Malik (1992) showed that rural poverty declined remarkably from 1984-85 to 1987-88, both in terms of headcount measures and poverty gap, it declined from 21 per cent to 15.5 per cent for the country. Decline was highest for Baluchistan followed by Punjab and NWFP.

Ahmad and Ludlow's (1989) headcount ratios suggested a drop in poverty in 1985-86 regardless of whether sector or cutoff points or household or individual distributions were considered. Ercelawn's (1990) analysis found headcount to be 20 per cent for all households 21 per cent for rural Punjab and Sindh and 10 per cent for NWFP and 31 per cent for Baluchistan for 1984-85.

### *3) Poverty Trends in late Eighties and Early Nineties*

Jafri and Khattak (1995) showed that in 1990-91, 41 per cent of the households were living below poverty line which when compared to late 1980 figures indicated that incidence of poverty increased over time. More recently estimates by Amjad and Kemal (1997) lent their support to the above.

Jafri and Khattak also showed that in urban areas poverty increased in the late 80's from 46 per cent to 56 per cent in 1990-91. It remained unchanged during this period in rural areas at around 32 per cent. In 1990-91 the extent of poverty was estimated to be 1.7 times higher in the urban areas than in the rural areas. The income gap ratio showed that poverty was very severe during 1985-86 to 1987-88 and the individual poverty gap was 23 per cent of the poverty line. In urban and rural areas the gap was 27 per cent and 21 per cent of the poverty line respectively. It increased to 31 per cent in 1990-91. The gap was 34 per cent and 29 per cent in the urban and rural areas respectively. Thus poverty was not only severe but increased during this period and inequality amongst the poor was more prevalent in the urban areas than in rural areas. The study also indicated that incidence of poverty during 1987-88 to 1990-91 increased with an increase of 5 per cent in overall poverty in the country. Poverty increased by 11 per cent in the urban areas and remained the same in the rural areas. The authors were of the opinion that part of the increase in poverty may be attributed to the improvements in the methodol-

ogy of data collection, improved questionnaire to compute income from multiple sources and a greater effort to improve the income information from the richer classes through probing questions.

More recent estimates of poverty are provided in the Report of the Working Group on Poverty Alleviation, Planning Commission (1997). This indicated that in 1992-93, 22 per cent of the households were living below the poverty line, with 22 per cent in the urban areas and 26 per cent in rural areas. The income gap was estimated to be 17 per cent and the overall FGT index was calculated at 1.05. The study also provided independent estimates of poverty in the earlier years, (see Table 1 for details).

#### ***4) More Recent Trends in Poverty***

This section of the paper measures poverty based on data from the HIES and PIHS of 1992-93, 1993-94 and 1995-96. The results are presented in Table 2, (For details of estimation of poverty lines see the Methodology Section in Appendix A). The headcount measure indicates that poverty has increased in the recent past with the percentage of households below poverty line being 22 per cent in 1992-93, 27 per cent in 1993-94 and increasing to over 31 per cent in 1995-96.<sup>4</sup>

The percentage of households living below poverty line shows mixed results when food poverty is considered. In Sindh percentage of poor increased from 21 per cent in 1992-93 to 33 per cent in 1993-94 and declined to 31 per cent in 1995-96. Same pattern is observed for NWFP and Baluchistan when food poverty is considered.

When basic needs poverty line is used the situation is even worse poverty being more widespread throughout the country with the percentage of poor increasing from 47 per cent in 1992-93 to almost 50 per cent in 1995-96. For Punjab the percentage of poor consistently went up from 43 to 44 and then to almost 50 per cent in the corresponding years. Similarly in Baluchistan and NWFP the percentage of the poor has increased. Only in Sindh the poverty situation has improved slightly.<sup>5</sup>

<sup>4</sup> The latest poverty scenario in the country paints a very gloomy picture. UN Poverty Report 2000 reports that the number of poor people in Pakistan increased to 31.8 million in 1990s registering an annual increase of 1.4 per cent in the last twelve years. The quality of life of the poorer segments of the society continues to deteriorate. According to another estimate 34 per cent of total population is currently living below the poverty line, i.e., having income below Rs3000 per month. The incidence of poverty is higher in rural areas at 32 per cent than in urban areas at 27 per cent.

<sup>5</sup> Strong rural-urban difference in the extent of poverty is observed. A comparison of incidence of poverty across regions of the country in Jamal and Ghaus (2000), leads to some interesting observations. Baluchistan is the poorest province with the highest incidence of both urban and rural poverty. More than 50 per cent of the rural and 35 per cent of the urban population is below the poverty line. Sindh has the second highest incidence of poverty in the country of 37 per cent.



Author	Definition of Poverty Line	Poverty Line (Rs)	Poverty in Pakistan					(Summary of Literature)				
			1963-64	1969-70	1971-72	1978-79	1984-85	1987-88	1990-91	1992-93		
Naseem (1973)	Per capita annual expenditure arbitrarily fixed in 1959-60 prices	Rural	43.1	26.0	19.2	-	-	-	-	-	-	-
		Urban	60.5	59.7	58.4	-	-	-	-	-	-	-
Allaudin (1975)	Per capita annual income arbitrarily fixed in 1959-60 Prices	Rural	56.5	35.6	41.6	-	-	-	-	-	-	-
		Urban	67.4	61.1	64.8	-	-	-	-	-	-	-
Naseem (1977)	Rural: 95 % of recommended 2100 caloric intake per capita	92%	54.0	46.0	55.0	-	-	-	-	-	-	-
		90%	45.0	36.0	43.0	-	-	-	-	-	-	-
Mujahid (1978)	Per capita annual expenditure arbitrarily fixed in 1959-60 prices	Rural	27.4	35.0	-	-	-	-	-	-	-	-
		Urban	39.5	47.6	-	-	-	-	-	-	-	-
		300	35.5	29.4	-	-	-	-	-	-	-	-
		375	51.7	46.2	-	-	-	-	-	-	-	-
			<u>Population</u>									
		Rural	29.2	39.5	-	-	-	-	-	-	-	-
		Urban	41.6	52.6	-	-	-	-	-	-	-	-
		300	39.5	33.7	-	-	-	-	-	-	-	-
		375	55.0	51.9	-	-	-	-	-	-	-	-
Irfan and Amjad (1984)	Monthly per capita income consistent with 2,550 calories in minimum intake of 1979 prices		<u>Population</u>									
		Rural poor	40.9	54.5	-	41.2	-	-	-	-	-	-
		Very poor	32.2	43.2	-	29.3	-	-	-	-	-	-

(continued)

TABLE I (continued)

De Kruik and Van Leeuwen (1985)	Expenditure per house- hold at 1979 prices	Overall Rural Urban	700 700 700	Households	
				65.0 73.0 50.0	43.0 51.0 30.0
Malik (1988)	Monthly per capita consumption at 1984-85 prices	Rural	159	44.24	29.10
			172	42.69	29.21
		Urban	185	40.88	23.64
Akhtar (1988)	Per capita annual on expen- diture based on 1959-60 esti- mates converted to 1979 prices		207	48.89	30.95
		Rural	948	-	12.0
		Urban	1260	-	20.0
Ercelawn (1988)	Per capita annual expenditure for 2550 calories/day/ac. X 0.75	Rural	325	-	25.0
			960	-	19.0
			1716	-	20.0
		Urban	504	-	38.0
			1404	-	32.0
Ercelawn (1989)	Per capita annual expenditure current prices		2592	-	36.0
		Urban	1584	-	38.0
			2748	-	37.0
		Urban	1524	-	36.0
Ahmad and Allison (1990)	Per capita monthly expendi- diture in 1979 prices (update to 1984-85 using GDP deflator from World Bank)		2436	-	32.0
		Rural	100	-	25.0
			110	-	20.0
		Urban	110	-	16.0
Ercelawn (1990)	Monthly per capita expen- diture consistent with mini- mum intake of 2,550 calor- ies/day/a.e.; in current prices			Population	
		Rural	100	-	30.0
		Urban	110	-	23.0

(continued)

TABLE 1 (continued)

<i>Punjab</i>	Rural	150	-	-	-	-	-	21.0	-	-	-
	Urban	150	-	-	-	-	-	13.0	-	-	-
<i>Sindh</i>	Rural	170	-	-	-	-	-	21.0	-	-	-
	Urban	170	-	-	-	-	-	6.0	-	-	-
<i>Northwest Frontier Province</i>	Rural	145	-	-	-	-	-	10.0	-	-	-
	Urban	145	-	-	-	-	-	8.0	-	-	-
<i>Balochistan</i>	Rural	160	-	-	-	-	-	31.0	-	-	-
	Urban	160	-	-	-	-	-	19.0	-	-	-
<i>Pakistan (average)</i>	Rural	-	-	-	-	-	-	20.0	-	-	-
	Urban	-	-	-	-	-	-	10.0	-	-	-
Jafri and Khattak (1995)	Monthly per capita expenditure consistent with minimum intake of 2550 calories/day/a.e.	-	-	-	-	-	-	-	35.69	40.57	-
	Total	-	-	-	-	-	-	-	33.28	2.50	-
Rashid Amjad and A. R. Kamal (1997)	Rural	-	-	-	-	-	-	-	44.77	56.26	-
	Urban	-	-	-	-	-	-	-	-	-	-
	Total	-	40.24	46.53	-	30.68	24.47	17.32	22.11	22.40	-
	Rural	-	38.94	49.11	-	32.51	25.87	18.32	23.59	23.35	-
	Urban	-	44.53	38.76	-	25.94	21.17	14.99	18.64	15.50	-

Not available; a.e. Adult equivalent.

Note: Some studies show poverty at two different poverty lines since the magnitude of poverty is sensitive to the choice of poverty line. A. in Erclawn (1988) the different poverty lines all represent 0.75 of the annual expenditure required to consume 2,550 calories per day per adult equivalent.

Source: Adapted and expanded from Malik (1992)

TABLE 2

Pervallence of Poverty in Pakistan 1990s  
(Various Measures)

HOUSEHOLDS BELOW POVERTY LINE						
	1992-93		1993-94		1995-96	
	Poverty Line (Rs)	% of housholds below poverty line	Poverty line (Rs)	% of housholds below poverty line	Poverty line (Rs)	% of housholds below poverty line
<b>FOOD POVERTY LINE</b>						
Pakistan	229	22.60	263	27.00	354	31.50
Punjab	221	22.20	253	30.20	347	34.01
Sindh	227	21.30	290	33.70	349	30.06
NWFP	237	23.10	249	17.00	364	24.00
Balochistan	248	26.30	277	19.80	365	24.00
<b>BASIC NEEDS POVERTY LINE</b>						
Pakistan	402	46.80	439	47.80	563	49.50
Punjab	396	43.40	396	44.40	542	49.80
Sindh	425	50.01	488	46.40	565	47.60
NWFP	390	49.70	407	51.00	600	52.80
Balochistan	391	44.10	494	45.00	571	50.00
<b>POVERTY GAP (Food)</b>					1992-93	
Pakistan					0.18	
Punjab					0.17	
Sindh					0.18	
NWFP					0.17	
Balochistan					0.16	
<b>POVERTY GAP (Basic Needs)</b>					1992-93	
Pakistan					0.2403	
Punjab					0.2468	
Sindh					0.2584	
NWFP					0.2149	
Balochistan					0.2254	

(continued)

**TABLE 2**  
(continued)

<b>FGT (Food Poverty Line)</b>	<b>1992-93</b>
Pakistan	4.887
Punjab	4.940
Sindh	5.120
NWFP	4.550
Balochistan	3.890
<b>FGT (Basic Needs)</b>	<b>1992-93</b>
Pakistan	8.31
Punjab	8.39
Sindh	0.15
NWFP	6.54
Balochistan	7.21

*Note:* See, Appendix-A, for calculation details.

The poverty gap and the FGT index are calculated and reported for 1992-93 only. Estimates of the poverty gap through the food poverty line do not vary much and are around 16-18 per cent across the country. The estimate of the poverty gap through the basic needs poverty line is substantially higher as expected.<sup>6</sup>

The FGT index 1992-93 indicates that poverty is much more intense in Pakistan. Compared to the other estimates for Pakistan for 1990-91 [Jafri and Khattak (1995)] the situation in the country has worsened in the period. The index also shows that poverty is more intense in Sindh and Punjab than in the other two provinces. The basic needs FGT index is substantially higher than the food FGT index across the country.

The above results indicate that the poverty situation in the country in the recent past has worsened considerably and its intensity has increased. The results are

There is a striking difference in the poverty incidence between the rural and the urban areas of the province. Only 20 per cent of the urban population lives below the poverty line as opposed to more than 50 per cent in the rural areas. The poverty gap in the rural areas is also very high at 14 per cent as compared to only 4 per cent in urban Sindh. Punjab is the only province where urban poverty is more severe than rural poverty. The incidence of urban poverty is 33 per cent as compared to 27 per cent in rural Punjab. This may perhaps be attributed to the buoyant agricultural sector in the province.

<sup>6</sup> Comparative poverty gaps, estimated through the methodology suggested by the Planning Commission, are more or less the same.

contrary to the optimistic general belief at the beginning of the decade when the World Bank Report on Poverty (1996) expected poverty to decline mainly because of the increase in the per capita consumption of around 3 per cent between 1990-91 and 1993-94. However these results are consistent with other research which reported that poverty was already increasing in the country as early as 1990-91.

### *5) Human Aspects of Poverty*

Like many other developing countries research on measurement of poverty in Pakistan has concentrated on income or consumption based poverty. Although income is an important dimension of poverty it gives only a partial picture. The human development aspect of poverty – demand of choices and opportunities for living a tolerable life – is just as important. Poverty should be addressed in all its dimensions and not income alone. A human development index using indicators of basic dimensions of deprivations like lack of education, lack of access to basic services (water, health) and a low life expectancy is used to measure human poverty. A Human Poverty Index (HPI), a Human Development Index (HDI) and a Gender Equality Index (GEI) are calculated for the period from 1973 to 1996 based on the methodology used in the Human Development Report 1997. Data used comes from the HIES. The HDI measures the achievements of a country in three basic dimensions of human development longevity, education and decent standard of living and is based on variables like life expectancy, child mortality, educational attainment (adult literacy, combined enrollment rates of primary secondary and tertiary education). The HPI is calculated to measure basic human deprivation and variables used are percentage of people expected to die before 40 years of age and percentage of people without excess to services like water health and nutrition. The gender related index of human development (GEI) takes account of the inequality in achievement between men and women. These indices have been used as planning tools in many developing countries for identifying areas of concentrated poverty within a country and show progress in human development of countries over a period of time. The HPI, HDI and GEI indices are presented in Table 3.<sup>7</sup>

The results show that Pakistan has done better in reducing income poverty than human poverty. In 1996 over 45 per cent of its people suffered human poverty. The country has made very little progress in human development over the years as indicated by all three indices which have not improved much between 1973 and 1996. Pakistan ranks very low on human development as compared to other coun-

<sup>7</sup> For detailed Methodology for calculation of these indices refer to the Technical Notes of the Human Development Report 1997. The data used is available on request from the author.

TABLE 3

## Human Development Indices

Year	Pakistan	Punjab	Sindh	NWFP	Balochistan
Human Poverty Index (HPI)					
1973	67.55	66.17	65.81	72.34	87.85
1985	59.79	56.03	57.51	66.61	83.03
1987	54.16	49.79	51.70	61.31	78.06
1991	50.25	45.62	47.85	57.86	73.25
1993	49.49	44.42	47.28	57.74	71.62
1994	48.51	43.13	46.50	57.48	70.01
1996	44.98	38.83	44.10	56.48	63.91
Human Development Index (HDI)					
1973	0.50	0.49	0.54	0.47	0.49
1985	0.54	0.53	0.56	0.53	0.46
1987	0.55	0.54	0.56	0.55	0.46
1991	0.57	0.56	0.59	0.57	0.49
1993	0.58	0.57	0.60	0.58	0.50
1994	0.59	0.57	0.60	0.58	0.50
1996	0.60	0.58	0.61	0.59	0.51
Gender Equality Index (GEI)					
1973	0.26	0.30	0.05	0.53	0.00
1985	0.25	0.30	0.18	0.43	0.35
1987	0.34	0.39	0.20	0.53	0.17
1991	0.29	0.30	0.13	0.31	0.27
1993	0.24	0.27	0.07	0.31	0.21
1994	0.25	0.26	0.06	0.29	0.19
1996	0.25	0.24	0.05	0.26	0.19

tries as shown by the value of HDI and HPI.<sup>8</sup> An indicator of gender inequality in basic capabilities GEI is substantially lower than in most other countries indicating that in Pakistan women suffer the double deprivation of low overall achievement and lower achievement than men.

A comparison across the different provinces shows that the HPI has improved in all the provinces however this may be misleading as over the long period of 1973 to 1996 human poverty has been reduced only by around 20 per cent. The achievements when compared with other countries show that the improvement is modest. Progress has been fast in human development in some countries and a study of these shows that they have invested heavily in sectors like education, health, nutrition.

The calculated HDI substantiates the above results and as seen from Table 3 there has been little improvement in the index over the years. Very little variation is seen in the index for the different provinces. Similarly the value for index GEI is very low as compared to other countries. The index is lowest in the province of Sindh indicating highest gender inequality and deprivation there. It is evident from the above that policy makers need to pay more attention to reducing basic deprivation like access to basic education, water, health and water and to longevity of life. They also need to formulate policies to narrow the gender gap in capabilities and opportunities. Lessons are to be learnt from other countries which have made substantive progress in reducing human poverty.

### **6) Policies and Poverty**

In spite of an impressive growth rate in its GDP throughout the decades of 1960 to early 1990s of around 6 per cent per annum, a large proportion of the population in the country still remains poor. Comparisons by some studies in other developing countries suggest that the structure of the economic growth process in Pakistan is such that it constrains its capacity to reduce poverty. The main structural characteristics which are cited to constrain the ability of GDP growth to reduce poverty are as follows:

<sup>8</sup> Not only has income poverty been on the rise in the country but other dimensions of poverty also present an equally dismal picture. 'A Profile of Poverty in Pakistan' prepared by the Mahbub-ul-Haq Centre for Human Development (MHCHD), Islamabad, provides a disturbing profile of poverty in the country. The statistics are revealing: 47 million adults or 62 per cent of adults cannot read or write; 76 per cent of female adult population is illiterate; 8 million children are out of school; 61 million people or 45 per cent population have no access to safe drinking water; 54 million people or 40 per cent population have no access to basic health services; 72 million people or 53 per cent population do not have access to sanitation and 9 million children under the age of 5 or 38 per cent population are malnourished.



- i) a highly unequal distribution of productive assets in both agriculture and industry,
- ii) structure of output is concentrated toward low value added products, particularly in the export sector which has resulted in low labour productivity,
- iii) the labor force possesses low skills and its distribution is such that it concentrates in low productivity sectors both in agriculture and industry.

But more than the structure of the economy the macroeconomic policies that have been adopted in the past and the resulting incentives structure in the country are responsible for this adverse effect on poverty. A study by Amjad and Kemal (1997) has summarised the situation well and identified three sets of macroeconomic factors which have been mainly responsible. First the policies followed with respect to the tariff structure and fiscal and monetary incentives have biased growth in low value added manufacturing and favoured production for the domestic market at the expense of exports, of capital incentive technology at the expense of a labour intensive one. Second institutional constraints in the way of output growth of essential commodities and the accompanying inflation has reduced the real incomes of wage earners and the self-employed both in the rural and urban sectors. Thirdly the reduced official inflow of foreign grants and low interest loans as well as reduced inflow of remittances have had their adverse impact on poverty.

The impact of the structural adjustment program in the country on the poverty situation has been an adverse one when the pre- adoption period of 1884-85 to 1987-88 and the period of its adoption upto 1991-92 is compared, [see Zaidi (1994) and the comparative rates of poverty in the preceding section].

Since 1997 attention has focused on tackling the poverty problem in the country. The report of the Task Force on eradication of poverty 1997 has highlighted in detail the strategic changes that need to be brought about in order to reduce poverty through economic growth. It recommends a five pronged national strategy for establishing the institutional basis for overcoming poverty. The salient features of the program are as follows:

- a) participatory development at the village and mohalla level,
- b) providing micro credit to the poor in rural and urban areas,
- c) a mass training program in basic skills combined with an employment provision program which would generate employment especially in village based development projects, self-employment in urban informal sector, technical employment in the large scale manufacturing sector and infrastructure construction projects, rural off farm sector, and in the computer software service industry,
- d) eliminating the practice of employing child labour in hazardous industries,

- e) a food security safety net to ensure availability of food for the indigent and the handicapped in urban areas and free lunch for school children in poor rural schools.

The government has already taken a number of important steps towards achieving its goals:

- i) An integrated Public Works Program to increase employment and augment opportunities for income generation has been launched.. Micro level structural schemes (roads, schools, health centres) which would create immediate employment are being proposed.
- ii) For providing access to credit for small and micro-enterprise a Poverty Alleviation Fund and a Micro Credit Bank have already been established. These will provide a non collateral basis for granting of loans and credit on personal guarantee and grant loans collectively to small groups.
- iii) Five Year SAP-II has been underway since 1997-98 at a total outlay of Rs498 billion and aims at improving the access and quality of basic formal education, primary health, rural water supply and sanitation and family planning.
- iv) System of Zakat and Bait-ul-Maal is being revamped for effective implementation. A food supplement program for the extremely poor will also be financed through the two schemes.
- v) A devolution of power plan is currently been implemented to enable citizen/poor to participate in decision making.

#### **IV. Determinants of Poverty**

The impact of various factors on the poverty status of the household is assessed in this section of the paper. A standard logit model has been applied to the data obtained from the latest Household Income and Expenditure Survey (1995-96) for the analysis. The dependent variable is the probability of being poor and is estimated through the basic needs approach where a household is taken to be poor if it is below the poverty line. The poverty lines and probability of being below the poverty line calculated in the last section is used. The dependent variable takes the value of one if the household is poor, zero otherwise.

The main determinants of poverty analysed are household characteristics like the dependency ratio, household size, number of earners; the characteristics of the head of household [like age (squared) and occupation]; highest level of education attained by any male and female member in the family. The relationship of poverty to living in rural and urban areas is also reported in the analysis. The results for the logit model analysis are presented separately for Pakistan and for the provinces in Table 4.

**TABLE 4**  
Model of Determinants of Poverty  
*Multi nominal logit results*

Variables	Pakistan (1)	Punjab (2)	Sindh (3)	NWFP (4)	Balochistan (5)
DRATIO	3.294 (03.28) <sup>3</sup>	3.099 (22.00) <sup>3</sup>	4.055 (17.674) <sup>3</sup>	3.989 (14.266) <sup>3</sup>	2.551 (5.690) <sup>3</sup>
HHSIZE	0.058 (1.94) <sup>1</sup>	0.016 (1.7) <sup>1</sup>	0.193 (2.50) <sup>2</sup>	0.024 (0.257)	-0.031 (-2.00) <sup>2</sup>
# EARNERS	-0.082 (-12.90) <sup>4</sup>	-0.062 (-7.268) <sup>3</sup>	-0.082 (-7.201) <sup>3</sup>	-0.152 (-10.204) <sup>3</sup>	-0.15 (-6.63) <sup>3</sup>
HI EDUC F	-0.581 (-16.214) <sup>3</sup>	-0.629 (-12.69) <sup>3</sup>	-0.465 (-8.052) <sup>3</sup>	-0.770 (-8.46) <sup>3</sup>	-0.226 (-2.52) <sup>2</sup>
HI EDUC M	-0.099 (-7.302) <sup>3</sup>	-0.129 (-7.588) <sup>3</sup>	-0.148 (-5.002) <sup>3</sup>	-0.011 (-0.353)	-0.126 (-1.96) <sup>2</sup>
AGE	0.018 (3.709) <sup>3</sup>	0.023 (1.726) <sup>1</sup>	0.021 (1.925) <sup>1</sup>	0.030 (2.55) <sup>2</sup>	-0.025 (-0.779)
AGE 2	-0.001 (-3.255) <sup>3</sup>	-0.001 (-1.724) <sup>1</sup>	-0.001 (-0.989)	-0.0001 (-2.897) <sup>3</sup>	-0.001 (-0.864)
OCCUP 1	-0.009 (-7.24) <sup>3</sup>	-0.018 (-8.99) <sup>3</sup>	-0.013 (-5.60) <sup>3</sup>	-0.014 (-4.85) <sup>3</sup>	0.001 (0.020)
OCCUP 2	0.426 (8.66) <sup>3</sup>	0.403 (4.34) <sup>3</sup>	0.413 (5.36) <sup>3</sup>	0.405 (4.56) <sup>3</sup>	0.466 (3.20) <sup>3</sup>
OCCUP 3	0.117 (14.29) <sup>3</sup>	0.078 (7.60) <sup>3</sup>	0.160 (8.34) <sup>3</sup>	0.166 (6.13) <sup>3</sup>	0.174 (7.76) <sup>3</sup>
OCCUP 4	0.055 (3.44) <sup>3</sup>	0.089 (2.93) <sup>3</sup>	0.055 (1.73) <sup>1</sup>	0.048 (1.20)	-0.026 (-0.72)
OCCUP 5	0.955 (3.44) <sup>3</sup>	0.078 (2.93) <sup>3</sup>	0.055 (1.73) <sup>1</sup>	0.048 (1.20)	-0.026 (-0.72)
OCCUP 6	0.069 (16.26) <sup>3</sup>	0.072 (11.16) <sup>3</sup>	0.055 (6.66) <sup>3</sup>	0.080 (9.20) <sup>3</sup>	0.079 (5.19) <sup>3</sup>
RURAL	0.617 (21.129) <sup>3</sup>	0.546 (12.679) <sup>3</sup>	0.811 (12.925) <sup>3</sup>	0.465 (6.739) <sup>3</sup>	0.619 (6.639) <sup>3</sup>
CONSTANT	-3.598 (-23.522)	-2.990 (-13.762)	-4.384 (-14.293)	-3.825 (-10.694)	-2.366 (-4.55)
LOG LIKELIHOOD	-6319.55	-2957.08	-1556.21	-1178.23	-592.48

t-statistics in parenthesis.

<sup>1</sup> Significant at 90% level.<sup>2</sup> Significant at 95% level.<sup>3</sup> Significant at 99% level.

### *1) Characteristics of the Household and Poverty*

Household characteristics used in the analysis are dependency ratio (DRATIO),<sup>9</sup> size of the household (HHSIZE), number of earners (EARNERS) and two variables representing education, highest education level attained by a female (HIEDUCF) and highest education level attained by any male in the family (HIEDUCM).<sup>10</sup> All these variables appear to have a strong significant influence on poverty. Dependency ratios are high in Pakistan (World Bank Report 1990). DRATIO variable has a positive coefficient which is significant at the 99 percent level and shows that probability of being poor increases significantly with a high dependency ratio. The effect is significant across all the provinces. The HHSIZE also has a positive effect on the probability of being poor indicating that size of the household increases the needs of a household more than the increase in the resources available to it.<sup>11</sup> The effect of the variable is positive and significant in Punjab and Sindh but insignificant in NWFP. The coefficient for the variable is negative and significant in Baluchistan where the increase in the size of the household does not increase the probability of being poor.

The results for the household size variable have to be seen together with the number of earners variable. EARNER variable has a significant and negative effect throughout, showing that the higher the number of earners in the family the less the probability of it being poor. This is a result which is different from that for other studies for developing countries which show an insignificant effect of number of earners and a significant effect for household size variables.

Education of the head of the household is often cited to be an important determinant of poverty though the level at which it is important varies from study to study. The education of the head of household was used in initial specifications but was replaced later due to its insignificant effect. A different specification of the variable representing education is used. Two education variables are used, one representing the highest level of education attained by a female (HIEDUCF) and the other representing the highest level of education attained by any male (HIEDUCM). Both the education variables are negatively and significantly related to the probability of poverty. The HIEDUCF has a stronger negative influence on

<sup>9</sup> Includes the number of all children of less than 15 if they are not working and adults above 65 years, in addition the female and male members of the family who are not working are also considered to be dependents. The variable is defined differently than in other studies for other countries in view of the extended family system prevalent in the country.

<sup>10</sup> The level of education of the household variable was used in earlier specifications but was dropped because of insignificance in most of the equations.

<sup>11</sup> The effect of the number of earners is captured through a separate variable.

the probability of being poor showing that household where any female is educated are less likely to be poor. The results show that male education may be important in reducing poverty but female education is even more significant. The effect is significant in all the provinces but as the magnitude of the coefficient shows the influence in Baluchistan is weaker. Policy should therefore target female education as it can play a positive role in reducing poverty.

### *2) Characteristics of the Head and Poverty*

Three characteristics of the head of household are analysed in the logit equation in Table 4. Age of the head (AGE), squared of age (AGE2) and the occupation of the household head (OCCUP1 to OCCUP6) variables. Standard ILO occupation classifications are used in selecting the occupation variables; professional (OCCUP1), agriculture and related workers (OCCUP2), clerical workers (OCCUP3) sales workers (OCCUP4) service and transport related workers (OCCUP5) and production workers (OCCUP6).

AGE variable has a mixed influence. It has a positive and significant effect in the overall, Punjab, Sindh and NWFP equations indicating that probability of being poor increases with age, a result which is contrary to the life cycle effects of age. However the result is consistent with Havinga et al. (1989) where the lowest extent of poverty is observed for the age group below 30 years of age. The AGE2 variable effect is also mixed with a small negative coefficient. The variable is significant in the overall, Punjab, and NWFP equations and insignificant for other provinces.

A high incidence of poverty is observed for household whose heads are engaged in agriculture and related activities and in the service and transport sector and production workers. OCCUP2 variable has a positive and highly significant coefficient of around 0.4 in the overall as well as in the separate equations for the provinces indicating that agriculture workers have a high probability of being poor. The OCCUP3 and OCCUP6 variables are also highly significant in all equations with positive coefficients. In contrast heads in the professional category are less prone to poverty except in Baluchistan (Table 4, column 5). The variable is significant in all the equations except for Baluchistan. For heads characterised by clerical and sales occupations the results are mixed. Heads engaged in these occupations are also likely to be more poor in Pakistan, although the effect is small, it is significant.

### *3) Region of Residence and Poverty*

The results indicate a strong region of residence effect on poverty status of a household. A very strong rural-urban difference is observed with the rural variable consistently having a positive and significant effect in all the equations. Household

living in rural areas of Pakistan and in the provinces are likely to be poorer as the coefficient for the variable are high in magnitude and positive and significant throughout.

## V. Conclusions and Policy Implications

Main results of the paper are summarised and conclusions drawn in this section of the paper. A historical review of poverty indicates that evidence on poverty in the early years was mixed but the proportion of the poor in the country was very high. Little specific attention was paid to reducing poverty during this period. Although there was considerable growth in the country the fruits of this were not evenly distributed.

In the Seventies and upto the mid Eighties the situation was better with most of the estimates indicating that the extent of poverty declined. There were however variations in the estimates across rural-urban areas in poverty levels. This was the period when inflow of remittances into the country especially to rural areas was high.

Poverty trends in the late Eighties and the Nineties were again not very encouraging especially since the Nineties when poverty increased. The estimates from the latest data available indicate that the situation is worsening. The percentage of households living below poverty line was 22 per cent in 1992-93, it increased to 31 per cent in 1995-96. If basic needs poverty line estimates are used, around 50 per cent of population is classified as poor. This is true of all provinces except Sindh where there is a slight improvement. These results are contrary to the general belief in the early Nineties when matters were expected to improve and poverty was expected to decline.

The results show that over the years Pakistan has done better in reducing income or consumption poverty than human poverty.<sup>12</sup> In 1996, 45 per cent of the people suffered from human poverty. The country has made little progress in human development over the years and ranks very low as compared to other developing countries. HDI, HPI, and GEI indicate that the policy makers should pay more attention to reducing basic deprivations and invest heavily in improving services like water, health, education and nutrition. A focus on formulating policies to narrow gender gaps in capabilities and opportunities is essential.

Recent focused attention on alleviation/reduction of poverty suggests that more thought is going into the process. There is a realisation that things have gone very wrong and there is an urgent need to tackle the problem in a focused and innovative

<sup>12</sup> Except in the recent past when estimates of income/consumption poverty are also alarmingly high.

way. Concentration on micro credit and participatory development is highlighted and no doubt the key to success lies here but care should be taken that participatory development only complements the role of the State, it does not replace it.

Results on determinants of poverty identify groups who are most vulnerable and can be used as effective tools for policy makers. Dependency ratios, household size and level of education especially of female education are strong correlates of poverty. A high incidence of poverty is observed for households whose heads are engaged in agriculture and related activities, and in service and transport sectors. Households living in the rural areas of Pakistan and in its provinces are likely to be poorer than their urban counterparts. Programs to reduce poverty need to be targeted at these groups for them to be successful.

Although concentrated efforts have been made to combat poverty, the government has to be careful and ensure that the current poverty alleviation program does not meet the same fate as previous reform efforts in the country. It has to ensure that the program is totally transparent and free of corruption. Great emphasis is being placed on schemes to make credit accessible to the poor but a word of caution as previous schemes have miserably failed to target the poor through subsidized credit. The cheap credit leaked to the richer households and only a fraction of the credit went to the poor in the past. The subsidy dependence of institutions required regular injection of funds from either the government or donor agencies and did not prove to be sustainable. The government has to ensure both outreach and sustainability (especially with the current austerity programs of the World Bank and the IMF, economic and institutional reforms and the huge debt repayment obligations). It must be borne in mind that public expenditure on safety nets may not grow or may even have to be curtailed. Lately significant processes associated with economic liberalization, globalization and the forces of modernization are leading to greater dislocation and social insecurity. Adequate social protection in the shape of subsidized goods and services through public and private support to target groups to help them tide over the adverse impact have to be devised. Programs should be targeted to the poorest localities and groups. A partnership between poor groups and communities, experienced NGOs, commercial and financial institutions and local and national government agencies would be necessary to design viable programs and implement them.

Rapid advances in science and technology also have implications for the condition of the poor. Policies need to be directed to the needs of these groups. Skill development and application of technology to improve the productivity and quality of life of the poor should be focused on. Support may also be needed for development of infrastructure especially for the poor located in the remote and outlying areas.

Any conclusion on the poverty situation in Pakistan would be incomplete without a mention of data constraints and the value of accurate information. The results

of research and their interpretations are useful only if they are based on reliable and readily available statistics. Lastly but most importantly there has to be a will to make things work both on the part of the policy makers as well as the public.

*Applied Economics Research Centre  
University of Karachi*

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## APPENDIX-A

### Methodology for Estimation of Poverty

Both calorie based and basic needs approaches are used in estimations of our poverty lines and poverty. These approaches are based on a definition of a minimum norm or requirement of food intake or basic necessities. A poverty line is calculated based on this minimum. Households or population below this minimum are defined as poor. The estimated poverty line is based on the consumption of food expenditures in the calorie based approach. A daily intake of 2550 for rural areas and 2230 for urban areas calorie per adult equivalent on FAO/WHO standards is used. Minimum bundle of basic needs consisting of food, clothing, housing, health, education, transport, socialising and recreation facilities are used in the basic needs approach. Consumption data rather than income is stated to be more reliable in Pakistan and is therefore used.

Three indicators of poverty are estimated: (i) headcount ratio, (ii) income gap ratio and (iii) FGT index. The headcount is a measure where the poor are expressed as a proportion of the population who are below the poverty line. In the income gap ratio the extent of the poverty shortfall is considered and the average expenditure of the poor and its distance from the poverty line is expressed as a fraction of the poverty line. The FGT index measures the severity of poverty. The micro data available from HIES and PHIS of 1990-91, 1992-93, 1993-94 and 1995-96 is used for analysis.